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ORIGINAL

ABSTRACT OF CLINICAL REPORT ON THREE CARES OF UNUSUAL INTEREST.

BY THOMAS H. MANLEY, M.D.,
Professor of Surgery, New York School of Clinical Medicine.

Case 1. Mammoth Dermoid Cyst of the Scrotum, Complicated with Inguinal Hernia.

Patient, a German, aged 60, married, cigarmaker; rather steady drinker, but never excessive; undersized and spare habit. (Fig. 1.) His father at the age of fifty years died from the effects of an operation for a strangulated rupture. Mother died from some pulmonary affection at sixty. Always enjoyed good health until seven years ago, when he fell from a ladder a distance of about seven feet. Shortly after this he noticed a swelling on the right side. Went to a physician, who applied a truss. Soon after the truss was applied he noticed a swelling in the scrotum. As the truss caused him discomfort and failed to keep the hernia up, he discarded it after wearing it three months. For five years after the fall he went about his usual occupation, but after this time he became conscious that the swelling in the scrotum was rapidly increasing in volume and giving him so much inconvenience that he could not sit with ease at his bench; standing gave him pains in the loins and back; and he could only walk duck-fashion, with his legs spread widely apart. For the past two years the scrotal tumor had attained such dimensions and weight that he had to give up all regular work. It was necessary for him to have a trousers specially made to cover the protrusion and a harness arrangement extending up over both shoulders and across the back, from which was suspended a large canvas recepticle in which the vast scrotal bag rested. The effects of this mass finally began to tell on his general health, and, besides, there was no possible position he would take that did not augment his misery. This was notably the case when he retired at night, when he had to lie on the right side severely quiet, else any movement to turn the body caused a drag on the tumor, with much suffering. Dressing and undressing were awkward and painful, unless some one was at hand to hold the tumor up. In the heated seasons of the year his misery was great. On August 5, 1898, the patient was placed under my charge by Dr. George V. Hann, of this city. At this time his general condition was

not good. Evidences of senility were well marked. He was weak; the appetite was poor and the digestion bad. He had frequent colicky pains and was constipated. He had an irritable bladder, with want of full control over the vesical sphincter, so that his night's rest was broken and his clothes were befouled by decomposing urine. There was no evidence of enlarged prostate. I found it impossible to make out the meatus urinarius, to pass a catheter and collect sufficient urine for a proper analysis. The lower limb on the side involved was markedly atrophied and paresic. Psychic symptoms were well marked; the patient was exceedingly despondent, and alleged that, while he was aware that some description of an operation was necessary, he knew well that he could survive none.

FIGURE 1.—(1) Root of Penis; (2) Obliterated prepuce; (3 Left testis; (4) Outer aspect of tumor, left side; (5) Base distance, long axis, 13 inches; (6) Transverse diameter, 9 inches; (7) Site of hernia, reducible.

Local Examination.—On stripping the patient, a vast scrotal tumor presented. (Fig. 2.) The enlargement here was fairly symmetrical. The tumor extended well down, nearly to the knees, quite entirely obliterating the penis; the integument over scrotum was tense and smooth. By careful palpation the left testis could be felt, lying near the surface. On the left side the resistance to pressure was not so great as on the right, where the testis could not be located. At first sight the question arose—Was this a case of double hernia, or double hydrocele, or was it some description of cystic tumor? My examination of the patient in the erect and recumbent attitude assured me that there certainly was a hernia on the right side, but that the protrusion was not large The presence of the free testis lying on the surface precluded the possibility of hydrocele on that side. The history of the case with the symmetry of outline, convinced me that we had

a neoplasm to deal with, complicated by a hernia. The mass imparted a sense of fluctuation and was everywhere flat on percussion. The tumor measured 28 inches over its antero-posterior diameters and 24 over the lateral. The tumor was placed on a starchbox resting in a scales, in such a manner as to relieve all possible tension from above and was weighed. quantity from the other side of the

ules, disintegrated epithelia, crystals of the triple phosphates, urates, phosphate of lime and cholesterine. There was a considerable quantity of homogeneous material. In making the punctures to withdraw this fluid, the needle on the left side went in easily, but on the right force was necessary to send it through a very thick cartilaginous envelope. As a result of the

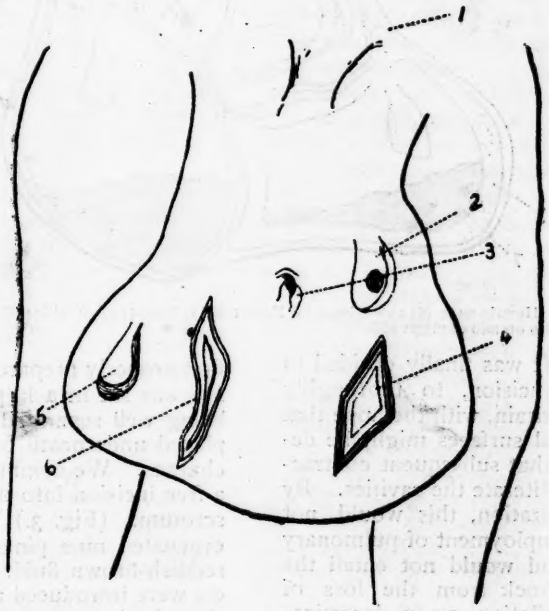

FIGURE 2.—(1) Root of penis; (2) Left testis; (3) Foreskin; (4) Incision on the left side; (5) Right testis, (6) Long incision on right side.

The net weight was 14 pounds and 12 ounces, or 236 ounces. Being assured that, at all events, we had liquid of some kind to deal with, the next question was to determine its character. With this object in view, I passed in an exploratory needle, and under suction withdrew half an ounce of liquid from one side and the same scrotum. This was of a reddish-brown color, odorless, and of a watery consistence. Its specific gravity was 1020, reaction alkaline. Chemist who examined the withdrawn fluid reported it as containing urea, the urates, phosphates and bilary salts, especially cholesterine. The microscopical examination revealed plenty of fat gran-

examination, it was clear to my mind that we had a dermoid cyst to deal with, probably multilocular. Now, what was the most rational and the safest course to pursue under the circumstances?

Treatment.—In a healthy, vigorous person it is clear that in any instance of cystic tumor of the spermatic cord, the epididymis or the testis, the course to pursue is complete enucleation. But here was a man of sixty, of broken-down constitution, with evidence of senile, degenerative changes. A very large dissection would be necessary. Contamination of the wound by the urine was quite certain, rendering primary union of the wound quite

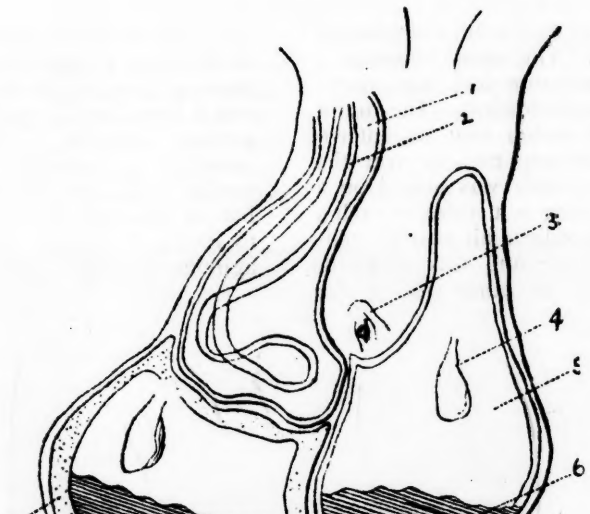

FIGURE 3.—(1) Hernia sac; (2) Intestines; (3) Prepuce; (4) Testis; (5) Fluids; (6) (7) Putty; Putty; (8) Cartilaginous walls on sac of right side.

impossible. It was finally decided to make a free incision, to thoroughly evacuate and drain, with the hope that the endothelial surfaces might be destroyed, and that subsequent contraction might obliterate the cavities. By using cocainization, this would not require the employment of pulmonary anesthetics and would not entail the dangers of shock from the loss of blood or mutilation, as in decortication. On the 10th of August he was operated on, the parts having been first properly prepared and cocainized. He was sat in a large chair, his legs being well separated and a receptacle placed underneath to receive the discharges. We commenced by making a free incision into the left side of the scrotum. (Fig. 3.) Through this was evacuated nine pints and a-half of a reddish-brown fluid. Then three fingers were introduced and a large quantity of a brown putty substance, with hairs of various lengths were dug out. When this was cleared out and the cavity well irrigated with a 2 per cent. solution of chloride of zinc, the tumor on the right side was opened. This had a thick, firm shell on its anterior and lateral aspect, but its posterior wall was elastic and flaccid. This contained a little more than three pints of fluid. There was not quite so much putty as in the left, but it was more gritty and contained several large particles of calcerous substance. When this cavity was evacuated, with three fingers in it, the right testis could be located, immediately posteriorly, having a very thick vaginal tunica. By lowering the patient's

FIGURE 4.—Photo showing final result; restoration of penis, support for lux scrotum, and truss on right side.

shoulders, the fingers yet in the hollow sac, it was easy to completely reduce the hernia, when the penis was restored. (Fig. 4.) The after treatment

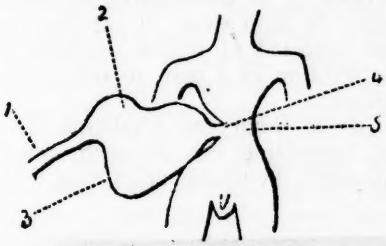

FIGURE 5.—TOTAL EVENTRATION.—(1) Umbilical cord; (2) Cavity of sac containing all the abdominal viscera except the kidneys; (3) Gauze-like envelope of sac; (4) Constricted isthmus at base; (5) Collapsed abdominal plates.

was simple. The patient was well sustained with tonics and nourishing food. His appetite and sleep returned, the colicky pains gave him no further trouble, and he recovered full control over his bladder. Before operation he weighed 114 pounds with his tumor, and now, three months later, he weighs 125 pounds without it. The evacuation sac on the left side was firmly obliterated after operation, without infection; but the thick shell on the right side suppurated. The resisting, hard, non-vascular walls became gradually detached and it was possible to remove them piecemeal, per morcellement, until all was brought through the opening, when final, solid union followed This shell contained plaques of bone substance, histologic cartilage and tufts of tubular racemose glands, with nearly every variety of epithelia. Now our patient is quite himself again. A considerable mass of redundant scrotal tissue remains, which he supports with an elastic pouch. The hernia is comfortably controlled by a truss, and locomotion is no longer attended with any inconvenience.

The case recorded belongs to a rare type of a very important class of tumors. Cystic tumors of the scrotum in the inguino-scrotal region, in both child and adult, are often confounded with, or mistaken for, hernia, or, as in this case, they may be complicated with it. In elderly or old men they are often mistaken for hydrocele. Sir Astly Cooper's diagnostic test in differentiation is a fallacious one, as he tells us that we may always recognize hydrocele, first, by its transparency; secondly by its fluctuation, and thirdly, by the swelling commencing from below. But every surgeon knows that all these signs may obtain in serous cysts. Monod and Terrillous have written a classic treatise on scrotal tumors, and emphasized the im-

FIGURE 6.—An enormous acquired umbilico-ventral hernia Eventration.

portance of exact diagnosis in their management. Ten years ago the writer called attention to the great number of inguinal and scrotal tumors, which are mistaken for hernia or hydrocele, and pointed out that accurate diagnosis is in many of them only possible by a free incision, when one should be always prepared to complete operative procedures.—"Serous Cysts and Cystic Formations," International Journal of Surgery, June, 1888. Dermoid tumors of the scrotum are very rare. Curling speaks of them, but declares that none ever came under his own observation. Goodsir, Erichsen and Marshall have each reported cases. Verneuil and Guersant collected and carefully studied nine cases. As to their cause Olivier believed that they were organic debris, originally of abdominal inclusion. The theory of fetal, inclusion, however, is dissented from by St. Hilaire, Lebert, and Paget. Klebs and Kocher were of the opinion that when the tumor contained heterogeneous tissue, it might be dependent on accidental grafting in early life. Volkman and Freunzmer express the belief that these cysts originally spring from Giraldes' hydatids in the epididymis, sometimes remaining undeveloped and provoking hydrocele, by erosion, or even rupture. Melchoir, in his record of 282 cases of hydrocele, enumerates 17 as complicated by teratomata on both sides. I can find no case reported of typical dermoid of the scrotum in a man so old as my patient.

Case 2. Embryonic Umbilical Hernia, containing the Stomach, Small Intestines, the Cecum and Colon, with the Liver, Spleen and Pancreas, in a New-Born Female Infant.

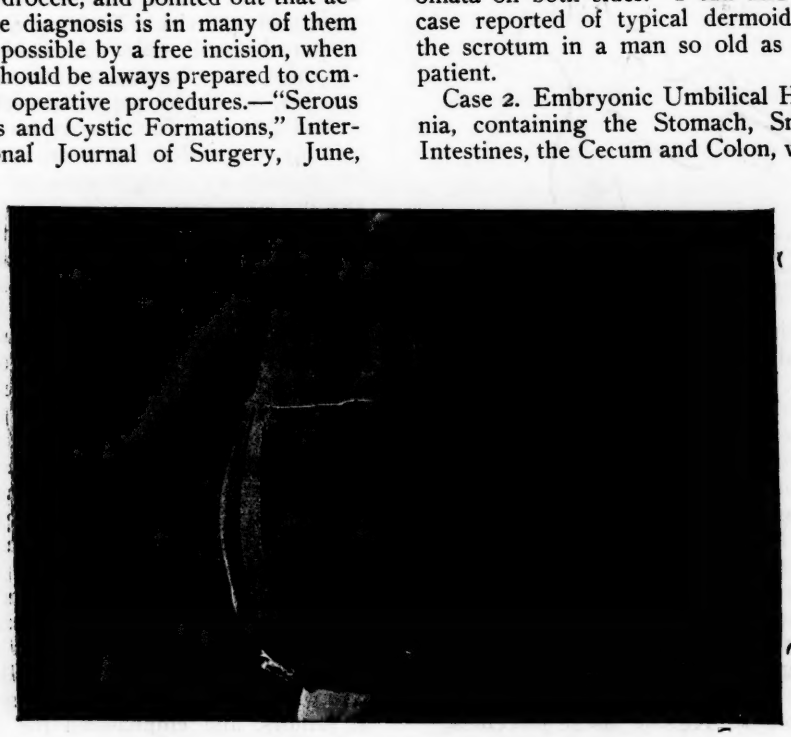

FIGURE 7.—Same, reduced and retained by the Schnoter ribbed supporter.

On the evening of October 12th Dr. L. Zwisohn, of this city, invited me to examine and operate on a newly-born female infant with a massive umbilical hernia (Fig. 5), which presented features of strangulation and impending gangrene of sac. The offspring was an eight-month child, the first born; the mother had rather poor health during pregnancy, though her labor was natural. The infant was rather thin, but energetic, and had an immense ventral hernia through the navel opening. Soon after birth the infant showed signs of suffering, and the thin envelope covering the protrusion presented a mottled color, with signs of impending gangrene. When

Dr. Zwisohn was called in consultation he advised, as a forlorn hope, the chances of a kelotomy to relieve the constriction and possibly return the extended viscera. On examination I found that we had to deal with a genuine case of embryonic hernia, the mesoblastic structures of the abdomen lying quite entirely outside, the lateral muscular plates having never closed in. The mass was of globular outline with a narrow pedicle at the navel aperture, then spreading out into a large thin-walled sac with the umbilical cord extending beyond it. The envelope was of a dark purple hue, presenting patches of necrotic changes. The infant was etherized and a free incision made through the abdominal end. Now it was evident that there was no abdominal cavity, as nothing but a diverticulum remained, which would barely admit the tip of the index finger. Within the sac were the stomach, liver, spleen and pancreas, with the small and large intestine. Nothing could be done in the way of relief, and hence the incision was closed by suture. Six hours later the infant succumbed. An autopsy was refused. The type of hernia above recorded is very rare when of such proportions, for there we had quite an entire eventration, all the viscera being enclosed by Rathke's membrane. This deformity constituted practically a congenital monstrosity. The coverings of these herniæ are always thin, nearly transparent, evascular and very brittle. Berger, in his recent brochure, records thirty-two of these cases of the minor variety which were treated by the radical operation. Twenty-six recovered and six died. In one case recorded by Landerek, a part of the stomach was engaged in the hernia. Benedik, in another discovered the spleen. Both Goodloe and von Hofsten recommend early operation, while Thudicum records twenty-six deaths after the early operation. Forge describes in detail the anatomy and surgical treatment of these herniæ when they are present in the minor degree. Broca has designated embryonic extrusion as "hernia into the opening canal." Delanglade describes the sac as being composed of the laminæ, between which is a layer of Wharton's jelly, and says that their thin vitelline membrane may rupture before birth, during delivery, or after the child is born. In those of a minor degree, embryonic hernia, whether into the cord or a diverticulum, is not a serious defect, but in the exaggerated type, as the one recorded, art is powerless and death inevitable. The embryological defect leading to embryonal hernia is of singular interest. The subject is not only directly related to embryology, but comparative anatomy, a branch of anatomical science which Professor Huntington has recently introduced into the regular course at the College of Physicians and Surgeons.

Professor Mall, of John Hopkins Medical College, in a recent able contribution, entitled "Development of the Human Intestine and its Position in the Adult," in speaking of the excursions of the fetal viscera, and the rather mysterious migrations of the intestinal tube during fetal existence, says: "Although it is comparatively easy to understand how the intestine leaves the peritoneal cavity to enter the cord it is extremely difficult to see how and why it enters. When the intestine enters the cord the communication of the celum with the body cavity is very free and the intestine small, but when the intestine returns to the body the cavity is large while the opening is small. . . . The return of the intestine into the body must take place very rapidly, for I have never seen a specimen in which it is in the process of returning. Embryos 40 mm. long either have the intestine in the cord or in the peritoneal cavity, and if it is in the latter, the communication between the cord and peritoneal cavity is open and surrounded by a thin membrane, showing that it also is being closed. This membrane now closes the whole opening, and later the recti muscles wander into it to complete the abdominal walls."

The condition is therefore an arrest of developmental processes, which in a minor degree occurs frequently, but disappears during the period of evolution and growth of the body.

Case 3. Large Irreducible Umbilico-Ventral Hernia in an aged woman.

Patient, aged 67; widow. No history of heredity nor injury. Had borne six children, the last when forty-two years old. After the last confinement, became conscious of a "lump," though, as it gave no annoyance, she wore no support nor truss. (Fig. 6.) For past year she had colicky pains with constipation; besides, the rupture was growing rapidly. She came under my notice, with a view of an operation for radical cure, but as she had atheroma of the vessels and other marks of senile degeneration, I advised against it, but sent her to the J. C. Schnoter Co., truss and brace manufacturers, New York, where she was fitted with a well constructed, ribbed abdominal supporter. (Fig. 7.) This gave her great comfort, with relief from the misery which she had formerly borne. This old lady suffered from one of the three well known anatomical types of umbilical hernia. In the first we have illustrated, in the case of the infant, the embryonic, or that in which the viscera were never within the abdomen, really not a true hernia. In the second the navel scar yields; that very common type of hernia seen in infants and children. In the third the eventration begins close to the umbilical scar, but never through it. This hernia rarely occurs except in child-bearing women, when there is commonly an extensive yielding in the median line, and the hernia hangs down over the pubis, when it may produce painful phenomena out of proportion to its volume. It is never completely reducible; there is no independent sac, but the viscera, by a vermicular movement, insinuate themselves between the muscle sheaths and are held by firm adhesions. Secondary herniæ form in the sac, and hence the patient is in danger of strangulation or seclusion. Most of these patients are obese or asthmatic, and besides many of them have glycosuria or albuminuria. But if seen early they may be always securely controlled by a truss, though a permanent cure is rarely attained in chronic exomphocele except by surgery, which is, in this class of cases, always an extreme measure that should not be urged unless there are symptoms of incarceration or impending strangulation. Here prophylaxis is most potent if utilized early. Those women prone to pendulous bellies after delivery, should always convey the strain from the weakened abdominal walls to the lumbar and sacral spine by a stout binder or belt. Constipation should be avoided. In their earlier evolution firm bandaging, with reduced and prolonged rest in bed, will greatly reduce their volume, and sometimes lead to a cure. In this type of hernia as many others, by patient and persevering conservative measures, even in the most troublesome ruptures, cure equally as efficient as by the more radical methods may be realized. In contemplating the special plan of treatment, the resources of the patient must be considered, as it is obvious in many instances the time consumed in treatment is an important factor.

HEREDITARY TRANSMISSION.

BY W. J. CRADDOCK, HOBTON, N. C.

Almost coeval with the birth of American freedom means, moral and Christian, laws, beneficial and compulsory, were instituted, and have since been maintained for the mitigation and suppression of intemperance. But another vice and sin of scarcely less importance thrusts its poisonous fangs into humanity at an early period of the human race and has ever since

been greatly destructive of the morals, health and lives of the inhabitants of the earth. It is that of the propagation and spread of syphilitic virus in all countries and all along down the stream of time. Emphatically is it a monster of such hideous mien that to be hated needs but to be seen. It is one of those terrible destroyers of the races of men that stalks abroad over the land with defiant footsteps and increasing power. And yet it is one of these great foes of mankind which sanitary science, under appropriate legislation is competent to circumvent, arrest, and banish from the land. This pest and plague of all countries, venereal disease has become in the United States a great national evil, demanding the interference not alone of the moralist and Christian, but of the legislator and statesman. Like the disease of alcoholism, it is one of those great moral questions that concerns us all and greatly affects the interests of society.

Leading men of science and humanity are taking hold of this and of other monstrous evils that injure the public health as never before and discussing the ways and means of banishing the monster from the land.

In consideration of the appalling numbers recorded by celebrated physicians of those affected by this destructive disease, it is not strange the number of infants who die in the towns and cities of the old country, as well as our own, is so enormous. They are like apples which decay upon the tree before they are ripe. Many children, by one or both parents, drop dead from their mother's womb. If perchance they are born alive a large number perish in infantile years, and the cause is this poison, though the world knows it not, but it is known by the best medical authorities.

It is true that for the want of statistics we are not accurately informed of the actual mortality of this hereditary disease. But common sense indicates it to be great because of the general damage done to the system during the progress of the malady; its poisonous influence upon the blood, nervous system and the solids of the body; and the general derangement and predisposition to morbid action which it causes. It cannot be too often repeated that the mortality to infants and young men from inherited syphilis is very great.

High medical authority exists for the statement that in Philadelphia, New York and other cities, eighty per cent. of the children who die under five years of age die from this cause. It is a well known fact that on the Sandwich Islands the mortality, infant and adult, from this disease is appalling. So rapid is its spread and so fatal is its effects that seventy-five per cents. of the population have perished during the last century from this cause. Nor does intelligence seem to be any bar to its progress. The refinements of civilization seem rather to invite its deadly approaches and destructive footsteps. Our free American soil appears to be indigenous than otherwise to its deceptive tread and its onward, ruinous march.

Nor have the worst features of the pernicious effects and fatal ravages of this horrible disease been yet unfolded. Syphilis is a prolific parent of scrofula and consumption. The connection between syphilis and scrofula and consumption is such, in the opinion of very eminent medical authorities, that the two latter are often the offspring of the former. Ample proof comes in corroboration of this doctrine. Even the history of the Southern negro before and since his emancipation supports this view. Scrofula and consumption were seldom seen in the negro while in slavery, whereas they are now encountered in him every day. Secondary syphilis was less frequent among negroes while slaves for the reason that their masters, from motives of gain as well as humanity, took every precaution to prevent it. Southern masters were proverbially careful and vigilant to protect the health and lives of their slaves. Now the negro is free to contract this loathsome disease and

scatter it, as he does, broadcast wherever he goes, as he scatters with a profuse hand most of the contagious and infectious diseases. Syphilis preys upon him as never before while in slavery, and never until free was he the everyday victim, as now, of its offsprings, scrofula and consumption. Why are they not treated as before? For the reason that many able to pay never apply for treatment. Even when they do they often leave the physician before cure is affected. Many, too, are so improvident as not to apply for medical service. Every true physician, always the conservator of the public health, is ever ready in the South to treat any case of syphilis in a freedman, however poor, improvident or abandoned. It is held by many of the ablest physicians on both sides of the Atlantic that scrofula, in all its forms, is but a modified form of syphilis, as many of their books show. True, some deny this, but none deny that scrofula, a hereditary disease, stands next to syphilis in its baneful influences upon the human race. The various diseases included under scrofula number over twenty. Among these are enlargements of the glands, white swelling as called, certain diseases of the eyes, and joints and skin eruptions, spine diseases, dropsy of the brain, etc., etc. What is called a scrofulous taint or constitution afflicts a very large number of children and sows the seeds of disease and death in perhaps a majority of families. It is even said by an eminent English physician that three-fourth of the people of Great Britain have the seeds of scrofula in their constitution. It is not probable that the newer and fresher stock who live on American soil are tainted to this seed extent. But that it often perplexes our best physicians to decide whether a disease is scrofulous or syphilitic, is well known so near akin is the one to the other. And yet these terrible diseases so fruitful in mortality are in the capacity and power of Preventive Medicine to banish from society. The calculation is, that about one out of every seven who die in this country dies from consumption. How long are these diseases, syphilis, scrofula and consumption, which are so terrific, to be allowed to go down the ages, bearing woe, diseases, blight, misery, death and extinction?

HYDRO-THERAPY IN THE TREATMENT OF GOUT, RHEUMATISM AND KINDRED CONSTITUTIONAL EMBARRASSMENS. IN RE TO FATTY AND ATHOROMIC HEART, AND ITS DIETARY MANAGEMENT.—WATER GENERALLY MEDICINAL. CITY DRINKING WATER AND SURFACE WATER.

BY J. J. CALDWELL, M. D., BALTIMORE, M. D.

*Water, as appears in holy writ, was God's first gift to man. We are told early in Genesis that "the Spirit of God moved upon the water," and it was long, long before the creation of man that seas, lakes and rivers were formed.

Now what is water—that fluid which pervades all nature; which forms the proper salt of the blood which flows through the entire fabric of man; which forms the sap of the tree from which we obtain our luscious fruits, and the juice of which, after passing into the grass, is by the vital power changed into chyle, then into blood, and finally into the flesh of our choicest porter-house steaks? We see the rain descend upon the earth and the spring issue from the mountain sides, and the dew on the plants in the early morning, but do we ask ourselves whence comes this blessing or what it consists of? Take the drop of water—the single drop. It has neither smell, taste nor color. yet we

*Prof. Archer Atkinson's graphic essay on the Magic Waters.

could not do without it. It forms an inhabited world in itself. One would hardly think this single tasteless drop of fluid was a compound of gases, of hydrogen two parts and of oxygen one part, but if you subject it to the heat of melting platinum you will find it disappear and nothing will be left. How is that? But place that drop into a tube which will stand intense heat, and then raise the temperature. You will still find it to disappear, but as the glass tube cools you will see moisture collect on the inner side of the glass. Now again, you may collect into a glass tube a mixture of hydrogen and oxygen gases in proper proportion. Now throw an electric spark into this tube. Immediately you see a drop of fluid having all the properties of water, which indeed is water in its purest state. Again boil a pint of water until there is nothing left in the vessel—what has become of this water? It has passed off into vapor. If instead of allowing this steam or vapor to escape we connect a glass tube a foot long to the vessel, and let this same tube empty into a glass reservoir placed in cold water, we find the vapor leaving the vessel to pass along the tube and be condensed into the reservoir. Now this is the process of distillation, and the condensed liquid is called distilled water, the aqua distillata of the materia medica. This is the druggist's plan of obtaining pure water, and the sailor may also obtain it from sea water.

Distilled water is then the purest form in which we find water, and as such we use it to dissolve delicate salts which would be decomposed in common well water. This precipitation results from the changes occurring in the salt dissolved in common water, for this fluid as found in nature contains more or less impurities, organic or inorganic, derived from the surface over and through which it has passed. The action of table salt on a solution of nitrate of silver shows this. Just so are changes continually occurring in the chemistry of nature. Water passing through certain layers of soil dissolves out the most soluble substances, and these in turn are left behind when other more soluble matter is encountered. Now this power of solution is the main advantage possessed by water. It is the most general solvent we possess.

We may naturally infer that as water dissolves salts at its natural temperature, it has still greater solvent power when heated. This is true with some few exceptions, as in the case of lime and soda, and water which at the surface heat would dissolve but little of the earth's elements, is capable of taking up much more at the centre where the heat increases one degree for every one hundred feet as we descend. See then at the natural drinking temperature of sixty degrees how we would expect water to warm up as we get down deep into the bowels of the earth, and even it is not uncommon to find wells one hundred and two hundred feet deep, and many artesian wells reach down two hundred feet. Thus in two thousand feet, we have sixty plus fifteen degrees, making seventy-five degrees. Now water at seventy-five degrees is not hot water to us, but if each fraction of degree renders water more a solvent, we may imagine how its solvent power increases when we reach very many thousand of feet below the surface. In some parts of the world we find hot springs which retain their warmth when conducted through tubes underground a considerable distance from their source.

Water has great power of retaining heat, and boils in an uncovered vessel at 212 degrees Fahrenheit—that is under a pressure of fifteen pounds to the square inch, which is the ordinary pressure of the atmosphere; but the greater the pressure the higher the boiling point, as on the top of a high mountain it boils at less than two hundred and twelve degrees, but if so placed as to stand the pressure of two atmospheres it requires 263 degrees to bring it to the boiling point, while at ten atmospheres it takes 358 degrees.

At the ordinary pressure boiling water is changed, if allowed to escape, to 1600 times its own volume in vapor, and this vapor having a specific gravity of only .62 rises. Now the difference between the weight of the water and its vapor or steam is one less .62, the specific gravity being 1, so that water is regarded as the standard for the specific gravity of other chemical agents. Thus beginning with water as 1 we have mercury 13. Water is taken as the unit, and the weights of other substances go up or lessen in proportion, as they weigh more or less than water. In this way we say that quicksilver has a specific gravity of 13, while iron is numbered as 7.8 as its specific gravity—being that many times heavier than water. At 32 degrees Fahrenheit water is changed into ice with increase of volume as seen in the cracking of pitchers and in the bursting of pipes. Now the specific gravity of ice is .92, which is less than that of water, so that an iceberg will float, and hence we read of immense mountains of ice in the polar seas. The frozen masses are half above and half below the surface of the sea, and as the sun shining feebly for but a few hours during the day, warms the water just enough to melt a portion of their base, so being top-heavy they roll over with crashes and noises like the booming of mighty cannon. Ice is a crystalline body, and assumes the hexagonal form as in the snowflake.

Water is widely diffused in nature —in rivers, seas, lakes and springs, both fresh and mineral, salt and fresh. We find it in the vaporing form, in the juices of plants, in the milk and blood of animals, in all the liquid excretions, as in sweat, urine, bile, gastric juice and saliva. We find it permeating all soils, and in the crystals of minerals, called the water of crystallization. Indeed, the fluids, largely consisting of water, compose about 5-6 of the weight of the body, and in some mollusks it forms the great bulk of the animal. In dropsies we find the distensions often enormous, and yet the fluid is mainly water holding in solution more or less albumen at the warmth of the body, and in diabetes we find even more urine passing from the bladder than will account for the water the patient has drunk. This often amounts to several gallons during the day, the enormous bulk of water being formed at the expense of the tissues, and holding in solution a great amount of sugar.

In chemistry water is all important for most salts cannot exist without, as the sulphate of lime or gypsum plaster yields to heat twenty per cent. of water which it quickly reabsorbs on exposure to the air. So with quicklime, which absorbs moisture with the evolution of heat. Alum when dried will give off about forty-five per cent. of water. We have what we call anhydrous salts, meaning such as do not contain water, but they are very few.

As a solvent water is chiefly used, but its powers as such vary as it requires but three parts to dissolve one part of common table salt, while it takes 10,000 parts to dissolve one of carbonate of lime, yet how much must have been needed, and time, too, to have dissolved and deposited such beautiful specimens as the stalactites and stalacmytes found at top and bottom of Myer's Cave in Virginia and in the famous Luray Caverns in Page county, Virginia. Again chloral hydrate is very soluble, indeed, almost its own bulk of water, but chlorate of potash is so slightly soluble as to give up only 24 grains to the ounce of water.

The carbonic acid gas is taken up by the rain as it falls, and is absorbed from the surface water besides being absorbed by springs. If you add one ounce of magnesia or lime to a pint of cold water some little is dissolved, but you scarcely miss it, but throw into the vessel a stream of carbonic gas, and you will see how much of the alkali will disappear; besides water takes up many other gases in its flowings, as oxygen, nitrogen and ammonia, else how could we expect fish to breathe at the bottom of the ocean.

This property is given to the denizens of the deep alone, while man could no more breathe under the water than he could fly in the air—the gills of fishes being endowed with such delicate sensibility as to enable them to absorb the oxygen held in suspension in the water. As the water flows from its spring to form the little rivulet which received other streams to form the creeks, and they in turn to form rivers which flow into lakes, it passes through mountains, over valleys, among silicious and lime-stone rocks, through different sorts of clay and forest leaves, to dissolve and carry to the sea the various salts which give its taste to it.

When we contemplate this universal solvent wherein even the constituents of man amounts to sixty or seventy per cent. of the fluid, and everything above and below him is held together by this wonderful cement is it to be wondered at that millions of our ancient brothers worshipped at the shrines of sunlight, air and water, as being the beginning and ending of all things? A wonderful and beautiful philosophy demonstrating in the hands of the Great Creator the magic power of force.

HUNYADI JANOS MINERAL WATERS, THE GREAT ALTERATIVE, IN RE TO DISEASED TISSUES, ABNORMAL PRODUCTS IN THE HUMAN ECONOMY.

When we speak of water in the plural we mean mineral waters, and in various countries are mineral springs, waters, baths, etc., derived from the mineral nature of the waters as they flow from peculiar hills or rocks. These mineral ingredients are in the waters as they issue from their sources, but as water is so general a solvent, it is capable of dissolving both wholesome and injurious agents. We find certain springs containing sulphuric acid, the sulphate of alumna, with or without the sulphate of iron. These alum waters are useful in cases of flabby tissues.

Perhaps the most noted mineral waters are such as contain large quantities of Epsom and Glauber's salts, and are, therefore, highly purgative. The best known water to the profession is Hunyadi Janos from Saxlehner's Bitter Water Springs near Budapest. In the remedy found in the home of these waters we have the best mingling of ingredients known to the therapeutic world as aperient bitter waters in affections of the skin, liver and other glands, as it contains large quantities of Epsom and Glauber's salts, besides less important salts of potash, sodium, soda, lime, etc., and they all combine to impart to the effect so well derived from the use of Hunyadi Janos. Though the strongest in its composition, it is the most pleasant in taste, and the gentlest in its operation. The benefit of the water is acknowledged over the whole world. The saline character of this water is produced by carbonic action, evolved from the earth, upon dolomite or magnesium lime-stone; this is the source of the large amount of Glauber's and Epsom salts which is present in the water, and which gives it its valuable therapeutic properties.

Hunyadi Janos water is clear and absolutely free from smell, it is distinctly but not disagreeably bitter, but has no taste of that brackish earthy taint which characterizes most natural saline waters. This water has a powerful effect on the mucous membranes of the stomach and intestines, which they stimulate to increased action, improve the appetite, and absolutely no ill-effect is produced on the general health. In it the elements are so kindly mixed as to form a compound of ideal perfection.

These following skin diseases we have had the best success in the treatment by the internal use of Hunyadi Janos and the wrapping of the afflicted parts in antiseptic Lister cotton saturated with Hunyadi Janos.

Now the following cases will be mentioned as illustrating my experience with the world wide Hunyadi Janos water in glandular and skin troubles:

I was lately called to attend a sufferer who was badly burned in different parts of the body. The burns

were dressed with Lister lint saturated with Hunyadi Janos, and exhibited internally by frequent small doses. The result was all that could be asked for, and in shorter time than any other treatment that could be used.

A young girl called to see me for inflammation in right labium due to irritation. Hunyadi Janos was given internally, and I applied Lister lint saturated with Hunyadi Janos, and there was great relief in a few days, and the trouble was removed entirely.

In ordinary enlarged glands and inflamed throat the same treatment is pursued.

The magic effect of Hunyadi Janos water is demonstrated in the following cases from my note-book lately under my care. Hunyadi Janos is the antidote for lead poison, making the innocent sulphate. This water is used as a spray treatment in inflamed throats in my practice. It is most effectual in connection with digitalis and strychnine in the gouty or rheumatic heart and in gouty deposits. It is the antidote for uric acid poison of rheumatism and gout and other embarrassments of abnormal metamorphii.

*Uric acid is found in the blood of gouty subjects during the attack. Garrod made this discovery in 1848; it has been corroborated a thousand times since; there seems to be no doubt, therefore, that gouty blood is comparatively rich in uric acid, whether this is the case during each period of the disease has not been definitely settled. Exact quantitative methods for determining small quantities of uric acid in the blood are wanting, so that the presence of small quantities has evaded detection. Garrod himself found uric acid in the blood of cases of chronic lead poisoning and of nephritis.

Uric acid in the shape of its insoluble salts is found in the concretions of gout, in the joints, the kidneys, in fact in every tissue of the body with the exception of the nervous system, which seems to enjoy an immunity. So pathognomonic are these uratic deposits for gout that we may say that wherever we find urates in concretions we have gout; but we can not invent this proposition because we certainly see typical cases of gout in which concretions of uric acid do not occur.

Such water as this deserves special attention from its scientific interest as one of the wonders of nature, not less than for its remarkable action upon the human system, for aside from its magic aperient qualities it has a broader and deeper significance.

"Salus, Populi Suprema Lex."

*Garrod's Medico-Chirurgical Transactions, 1848.

OUR WATER SUPPLY—ITS PURITY A NECESSITY OF HEALTH, AND THE LATTER A GREATER BLESSING THAN WEALTH.

A man in good health, even in hard times, may be sufficiently successful to get bread, only, to eat, yet he should, at least, have decent and pure water to wash it down the throats of himself and family—especially when he has to pay through his rent for the water. Now, the fact is, that that water should be fit to drink instead of being so unhealthy as to infect the bread and engender disease.

Who of our city officials are to blame for the present condition of our water supply? Where is the trouble? Is it the supply from Jones' Falls, Gunpowder and Lake Roland? If from either is our mayor, water department or health authorities at fault? Who is responsible for the typhoid and scarlet fevers, malaria and diphtheria almost epidemic in our city? Has the everlasting and perpetual drainage of fertilized fields and the constant drainage of offal, sinks and every character of putridity that empties themselves into our drinking water responsible, or are our officials? Are our sewers properly and regularly flushed to clean out our local filth and offensive gases, and if not, why not? How is it that any portion of the care of the health of our citizens has been transferred from the health, a professional department, to the un-

professional street-cleaning department? Why has the inspections of our city privies and other disease-creating concerns also been removed from professional to unprofessional control? His Honor, the Mayor, may yet live to learn that there is a vast difference between the two. In fact, more so than any other affairs under his supervision.

There is one thing that our mayor and city council should keep in mind, and that is that our entire people do not wish to be either poisoned or made sick upon the principle of "What is all the world to a man if his wife's a widow?" To correct the existing evil is what is needed, independent of the cost. Good water and health for our citizens are more essential than good streets, since a healthy person can manage to get over bad ones while sick persons cannot even travel or get over good ones.

Under these circumstances we prefer good water and health to almost any other blessing, and more respectfully appeal to our mayor and council to see to it that these "reforms" are at once and most speedily brought about for the public good and their own self respect and conscientious satisfaction.

This is but justice, and that at least ought to be accorded to the people who bear the expense. This justice is all they ask, and nothing else will satisfy them.

"The stream can be no purer than the source."

The source of the city of Baltimore and Philadelphia's water supply is the sewerage of the hills and valleys adjacent. Our reservoirs should have the attention towards cleanliness at least equal to the requirements of the culinary art, viz.: the cleanliness of the cooking utensils. Our reserwoirs are the receptacles of all the sewerage. The people of Baltimore drink the same without any purification. There being no filtering, no precipitation, we drink this filth without a question. Other large cities like New York, Brooklyn, Boston, Lawrence, &c., seek the supply from the fountain head—the gatherings of spring water—wherein nature does the percolation. It would have been far better for the health of Baltimore if they had adopted a like prevention. It would have saved us from epidemics and endemics, tonsilitis diphtheria, typhoids and many other zymotic diseases. "We must come to this, Horatio, at last," in order that we stand on ground of like sanitation of other progressive cities. Our aqueducts must eventually collect the country spring water to give us an equal standing with cities who are abreast with the health art. "The ounce of prevention is worth the pounds of cure."

HEALING SPRINGS, VIRGINIA.

BY JOSEPH M. CLAUSEN, A.M., M.D.

Marry, if you will, Carlsbad to Hornberg, Weisbaden to Nice, Sulzberg to Ostend or any of the foreign resorts, where health is the object sought for on the one hand and social relations and pleasure on the other, and you will have a European counterpart of that charming health and society resort, "Healing Springs." Situated in the mountain heart of the Virginias at an elevation above sea level of 2,500 feet, it seems indeed the favorite child of nature, since she has lavishly showered upon it her most precious gift. A changing landscape whose varied beauty no painter could ever fix on canvas. Scenery at once grand, picturesque and impressive, yet restful in its quiet grandeur. A climate that suggests the South of California and the mountain zones of Colorado and Nevada, yet surpassing both. An atmosphere wholly exempt from moisture, making of this favorite valley a paradise where damp days and penetrating nights are things unknown. Air in fact so dry, so pure, so laden with health giving qualities as alone to be an elixir of life, such as science can never hope to equal, and

lasily waters—healing waters—that are heaven prescribed antidotes and cures for some of the worst forms of disease that frail man is called upon to suffer.

To all of these science, art and the kindly impulses of man have added everything possible in the way of creature comforts. An ideal hostelry, perfect roads, a well equipped livery, sweeping lawns and every facility for the unhindered enjoyment of health, making this an ideal spot for invalids and pleasure seekers alike.

The hotel, a re-constructed old Southern mansion, is like its environments, "idealistic." It is built on the southern plan of expansive floor space and little height, it being but two stories high. Wide verandas surround it on every side, forming a fitting girdle to rooms and halls almost as roomy and cool as itself. Close to the hotel proper has been built a new bath house where every appliance will be found for using these waters of health to the very best advantage.

Mr. A. M. Stimson, the present lessee and manager, is a gentleman specially qualified by experience, ability and education for the position he holds. For many years he was associated with his father (the former lessee and manager) in the development of "Healing Springs," and with him enjoys an enviable reputation for their knowledge of the needs of the average invalid and their thoughtful promptness in meeting them. It is here and under his supervision that the "Healing Waters" are bottled for shipment to every civilized country in the world, they being prescribed by eminent physicians of every nationality for the cure of gout, rheumatism, nervous diseases, sciatica, various forms of dyspepsia, of the liver and kidneys, gastro intestinal catarrh, etc.

"Healing Springs" is situated on the Chesapeake and Ohio Railway, two and one-half miles below Hot Springs and in the same valley. It is but a few hours ride from the National Capital, and as the journey is made over well ballasted roads in luxurious Pullman coaches, and through a country noted for its beautifel scenery, the trip is but a pleasant prelude to the pleasures that await you at "Healing Springs."

ON THE TREATMENT OF CHRONIC AND ACUTE DISEASES OF THE RESPIRATORY PASSAGES WITH GUAIACOL CARBONATE AND CREOSOTAL.

BY DR. FRITZ HOLSCHER.

(Translated from the Tageblatt fur den Kongress zur Bekampfung der Tuberkulose als Volkskrankeit, No. 3.)

1. The treatment of pulmonary tuberculosis by means of the Carbonate of Guaiacol introduced by Seifert and myself in 1891, and by means of the analogous product Creosotal (Carbonate of Creosote) recommended shortly thereafter by Chaumier, has since then taken the first place in the medicinal management of the disease. The unanimous verdict of a great number of exact and competent observers places the curative results obtained with the two drugs beyond all peradventure of doubt.

2. Careful nutrition, and if possible, over-nutrition, is an essential factor in this form of treatment. A dietary rich in albuminoids is to be preferred, since the large amounts of guaiacol and creosote absorbed from the carbonates effect a markedly increased decomposition of albumins in the body. The examination of the urine shows that the absorbed creosote and guaiacol, combined with sulphur, is excreted again through the kidneys. This sulphur can only be derived from the albumins; and the latter must undergo decomposition from the withdrawal of the element. The amount of albumins corresponding to the sulphur excreted in combination with the creosote is a considerable one. A diet rich in albuminoids is therefore essential to prevent weakening of the patient whilst undergoing the Creosotal and Guaiacol Carbonate treatment. And since these remedies do not disturb the digestion like caustic and poisonous free creosote and guaiacol,

but on the contrary prevent such disturbances by stopping abnormal putrefactive processes, and increase the appetite, increased administration and assimilation of nutriment is made possible by their very exhibition.

3. The actions of Guaiacol Carbonate and Creosotal do not consist in the mere stimulation of the appetite, or in their influence on the symptoms of disease only. They seem to have a direct action upon the causative factor of the malady. In the first place the impregnation of the entire body with creosote combinations renders the life conditions unfavorable for the organic etiological agent of the disease; and in the second place it favors the elimination of the poisonous products of tissue metamorphosis which cause the disease symptoms, fever, anorexia, night-sweats, etc. These poisonous products are called labile albumins on account of their marked capabilities of chemical reaction. Hence they unite in the first place with the absorbed creosote, losing their sulphur; whilst the less actively reactive normal albumins only combine later. The withdrawal of the sulphur causes further decomposition, and the elimination of the products of such decomposition through the kidneys then follows.

4. The dark coloration of the urine which often occurs is no symptom of poisoning.

5. After the ingestion of Creosotal in large doses free creosote is eliminated directly through the lungs; the patient's breath smells strongly of the drug.

6. It is agreed by all careful observers that the Creosotal treatment has the following effects:

(a). Great increase in the appetite even in those cases in which previous treatment with creosote has caused complete anorexia.

(b). Rapid and often enormous increase of the body weight.

(c). Disappearance of the fever, night-sweats, and weakness after several weeks treatment.

(d.) Diminution of the cough and expectoration, and their final disappearance. The bacilli in the expectoration rapidly decrease in number.

(e). The physical signs of pronounced phthisis can be made to disappear in six months of treatment; a longer course, is, however, often required. In beginning phthisis on the other hand (apex catarrh with bacilli in the expectoration), the physical signs completely disappear after from two to three months of treatment.

7. The action of Creosotal in acute diseases of the lungs, such as pneumonia, broncho-pneumonia, grip pneumonia, etc., is even more remarkable than in chronic cases; as is shown by the researches which have just been published by Cassoute and Corgier from the hospitals of Marseilles. Pneumonia is cut short by the early administration of large doses of Creosotal; and the course of the disease is noticeably shortened when the drug is administered later on in the disease. The typical fall of temperature occurs in twenty-four hours after the administration of the drug. The afebrile condition is a permanent one if the exhibition of the Creosotal is persisted in. The temperature rises, however, if the administration of the remedy is discontinued before the auscultatory signs have completely disappeared. The sequelæ that so frequently occur, and more especially tuberculosis, are completely avoided by the Creosotal treatment of acute diseases of the lungs.

8. The use of ordinary creosote by many practitioners is not justified today, since Creosotal, administered as it is in drop doses, is cheap enough to be generally employed.

9. The extended employment of Creosotal and Guaiacol Carbonate at the present day will undoubtedly give us large statistical results of great interest. But these statistics will only be of permanent value if they include none but carefully observed cases, and if they are registered in tabular form, as has been done for example by Jacob and Nordt in the "Charite-Annalen" for 1897, with their experiences with Creosotal in Professor Leyden's Clinic.

Editorial

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THE WAY THE PENDULUM SWINGS.

Perhaps there is nothing that tells with greater effect in weakening public confidence like the ever vacillating attitude of the profession in the treatment of disease. At one time a certain remedy is lauded to the skies as a never-failing specific for a certain malady, to be shortly followed by some writer who can find no language strong enough to condemn it.

Such is the history of blood-letting, of sweating and purging, of emesis and catharsis in fevers.

"Fix, hold, immobilize your fragments and rest your limb" shout one set of teachers on fractures; while another say "Commence motion early and don't be afraid to move the fragments."

So in abdominal surgery. Laparotomy is, nowadays, performed everywhere and by nearly every practitioner. The general safety with which the healthy abdomen can be opened has led to excessive and much unnecessary surgery in this region. Indeed the extent of mutilating operations on the pelvis organs of women has been appalling.

Cut early and freely, has been the dictum in appendicitis. "As soon as you diagnose a case is appendicitis, cut." This wild irrational utterance has cost a large number of valuable lives, for let no one close his eyes to the fact that an operation for this lesion has a mortality, and a very large one at that, in certain types which would no doubt progress to recovery if let alone in the hands of a skillful physician.

True, cases of appendicitis will certainly die if not relieved by radical surgery, but unskillful, indiscriminate surgery will kill ten to one the highest art will save.

The mortality the past year in appendicical operation has been large; so large, in fact, that if all cases were fully published it would inevitably reflect discredit on a legitimate and invaluable surgical procedure when judiciously utilized in skillful hands.

T. H. M.

LAWSON TAIT.

But a few days since the profession in the United States was startled by the announcement that Dr. Lawson Tait was dead.

The name of Tait had become a household word throughout the civilized world, and he, no doubt, earned for himself a place in the niche of fame as one of the greatest lights that ever adorned the medical profession. Like Hunter and several others who shed lustre on British surgery he was of Scotch birth, and bred, it appears, in humble circumstances. He had to hew a path for himself and press forward to the front; nay, to the very summit of fame, by his own unaided efforts.

The venture and dash of the man were of the sublime order and stamped him as a born commander. He was richly endowed with those rare gifts which are bestowed on but few mortals. Napoleon like he distinguished himself from the very beginning. At the early age of twenty-five we find him as an unrivaled ovariotomist. For custom, tradition and authorities he had the greatest contempt. In fact, these had to be trampled in the dust before progress with him was possible.

Antisepsis, as propounded by Lord Lister, he turned his face against from the beginning, and though his life was short he lived long enough to see the triumph of his gospel of cleanliness.

Hepatic surgery was held in the background for centuries because physiologists based their conclusions on animal experimentation and had taught that the bile was a secretion essential to vital processes. Tait entirely ignored this view, cut down fearlessly on the gall-bladder, removed the facetted calculi and let the bile stream out through the abdominal walls. He even went so far as to deny that the bile is anything more than a byproduct. Be that as it may, the scalpel of Tait first opened the way for the brilliant results of hepatic surgery in our time.

This great operator was at his best in the surgery of the pelvis. Here his successes were phenomenal and he placed on a sound and enduring basis a domain of the healing art for which posterity will be forever his debtor.

In his time, as with all great pioneers, he had his enemies, but they met a foeman worthy of their steel, for he wielded a trenchant pen and seldom retired from the field until he had vanquished his antagonist.

With the death of Tait a bright light is extinguished and a void remains. Probably it will be in another generation that the historian will do him justice.

The life of Tait is a fitting commentary on the hollowness of all things in this world. He had attained to wealth and fame by middle age, but, we are told, that withal he was, in his latter days, in a wretched frame of mind. By faulty speculations his fortune was largely lost; the poignant, repeated thrusts of his enemies began to tell on him, and, it is said, he had decided to seek an asylum and contentment by leaving his native country and settling in America.

For about a year past he became conscious that his powerful constitution was being undermined by renal disease although he kept up until nearly the last. Early in May he penned his last, and one of his most valuable contributions, entitled "The Hygiene of the Bedstead and Bedroom." On the twenty-fifth of May he performed his last operation. On the 13th of June he was seized with uremic coma and passed away, in the fifty-fourth year of his age.

His remains were cremated in Liverpool and the ashes deposited in the garden of his country home in Wales.

MORE NEW OPERATIONS FOR THE RADICAL CURE OF HERNIA.

In the surgical section at the late meeting of the American Medical Association there was nothing particularly exciting or epoch-making presented. There was scarcely anything as a cure-all that would "boom" well in the press and place humanity in eternal debt to the benefactor.

Without doubt what was intended to constitute the event of the occasion was a dessertation on the operative cure of hernia by a new method by Dr. Alexander Ferguson, of Chicago. Before time was called the audience was well prepared by elaborate charts hung on the walls behind the chairman and duplicate copies of the text and drawings placed in the hands of all present.

Unhappily the time limit allowed the essayist cut Dr. Ferguson off before he had fairly entered on his theme. The scattered circular, however, compensated for this inconvenience and all had an opportunity of, at least, making a superficial survey of the new method.

Since then the essay has been published in full so that we are in a position now to weigh the claims and estimate the conclusions of the author.

During the past year new operations for hernia have been presented by Drs. Fowler and Lamphear, but none apparently based on such an extensive foundation as that of Dr. Ferguson.

It appears that he had as many as fifty dissections made in the course of his late researches and he believes that anatomy will explain the fundamental causation of hernia.

In inguinal hernia "defective origin of the internal oblique," according to his view, "is the primary cause of the protrusion." Starting out on this hypothesis he would restore the muscular origin and bring it well forward by transplantation, into Poupart's ligament.

Elaborate drawings were made to demonstrate the anatomical defect and the mode of effecting its repair. But to the experienced observer it is readily apparent that Dr. Ferguson's "anatomical defects" are only pathological conditions; a consequence and not a cause.

It is well, at the very threshold of this study, to bear in mind that neither physics, anatomy nor physiology will always explain the etiology of hernia, and it is certainly an error to assume that its fons et origo are parietal; that is, are in the abdominal walls.

Dr. Ferguson does well to deprecate those operations which destroy the inguinal canal and imperil the functions of the spermatic cord. We note, however, in the operation described by the author of the essay that the tendon of the internal oblique is split throughout its whole length, and that the cord is buried under the displaced fibers of this muscle.

Finally, it is obvious that displacement downwards and forwards of the internal oblique without their separation from the conjoined tendon is quite impossible, and furthermore the union effected by the method described is not calculated to endure or resist strain.

Sufficient time has not elapsed to determine whether the theoretical objections here submitted will be sustained by results. If they are there is no doubt that Dr. Ferguson will concede the failure of his method.

Every one knows how McBurney's operation for hernia was viewed ten years ago, but it was soon evident that it was a failure when no one was prepared to set it aside sooner than its author.

Hernial operations for radical cure or relief are among the most valuable additions to modern surgery. It is important, however, not to overlook the diverse etiological factors in operation and, hence, the necessity of adopting the operation to the special type of hernia before us, and when we do proceed to radical measures, not to

forget that after all there is a tendency to relapse in all; so that that operation involving the least mutilation and is the simplest in technique should be always preferred.

It is important to note that Dr. Ferguson, like Championaiere, recommends that his patients wear supporters over their weakened areas after they take their feet and resume their labors.

T. H. M.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION

The American Electro-Therapeutic Association will hold its ninth annual meeting at Washington, D. C., September 19, 20, 21, 1899. The President, Dr. F. B. Bishop, appointed the following committee of arrangements: Drs. D. Percy Hickling, Chairman; Jos. Taber Johnson, G. Lloyd Magruder, Z. T. Sowers, Robert Reyburn, G. Betton Massey, Chas. R. Luce, Elmer Sothoron, Llewellyn Eliot, Clifton Mayfield.

Willard's Hotel has been chosen for the headquarters and special rates have been made for all interested in this meeting.

Many able papers have been promised and a very successful scientific meeting is assured. There will be a large and varied exhibition of Electro-Therapeutic apparatus in Willard's Hall during the meeting of the Association.

The committee also promises a very pleasant social program, including a reception by the President of the United States, an excursion to Mt. Vernon, Arlington and Alexandria, a buffet lunch to be served at Alexandria, an evening visit to the Congressional Library, to be viewed under electrical illumination. Provisions have also been made to visit the War, State and Navy Departments, the United States Treasury and other public buildings.

Dr. Louis Lewis, of our contributing staff, is suffering from subacute glaucoma, but there are good hopes of his partial recovery in the near future. He will attend to his engagements at the very earliest opporunity.

Fischer Chemical Importing Company, of New York, are introducing Spinolum Siccum, which is a vegetable iron produced from spinach.

THERAPEUTICS

In charge of H. B. SHEFFIELD, M. D., New York.

CARBOLIC ACID AS A TEST FOR ALBUMIN.

Dr. Walter Colquhoun recommends a saturated solution (approximately six in one) of carbolic acid in absolute alcohol as a test equalling in delicacy the nitric acid test, and as giving perfect satisfaction after a short experience in working with it. Dr. Colquhoun's procedure is as follows: The test solution having been made by dissolving carbolic acid to saturation in absolute alcohol, the author floats a few drops of the solution on the top of the fluid to be tested by means of a pipette. Owing to the greater solubility of carbolic acid in alcohol than in water, the layer of testing fluid on the surface becomes opaque and rather milky looking form the separation of carbolic acid, as water is imbibed in the transfer between the urine and the alcohol. As the alcoholic solution of carbolic acid imbibes more water and becomes heavier, drops also of a milky appearance on their surfaces may detach themselves and fall to the bottom of the test tube. If much albumin is present the whole of the fluid to be tested may become milky, and the alcoholic layer may settle quickly to the bottom of the test tube with large milk-white flakes of albumin attached to it. In the case, however, of the presence of only a small quantity of albumin, the test tube must be allowed to lie for some time just as in the nitric-acid test, and the presence of albumin will be denoted by a milkiness extending to a certain depth below the alcoholic layer. As has already been remarked, milky looking drops of the alcoholic solution of carbolic acid may separate and fall to the bottom of the test tube. This happens even when the alcoholic test solution is floated on top of pure water and, as has been explained, the milkiness is due to the imbibition of water and consequent separation of carbolic acid. That this milkiness is not necessarily due to albumin may be shown, when only a trace of that substance is present, by passing the bottom of the test tube two or three times through the flame of a spirit lamp, when carbolic acid being more soluble in warm water than in cold, the milky deposit at once clears up. The milkiness of the upper part of the test tube below the alcoholic layer is, however, due to coagulated albumin, and does not appear unless that substance is present, nor is it dissipated by heat.

H. B. S.

—N. Y. Med. Jour., July 15, 1899.

ORTHOFORM IN THROAT AFFECTIONS.

Dr. Kassal employed orthoform in the form of a 25 per cent. emulsion of olive oil in laryngeal diseases. For about a quarter of an hour a burning sensation was experienced, but then succeeded by anæsthesia which lasted, as a rule, from 24 to 80 hours. The feeling of comfort experienced by the patient is remarkable; he is able to eat all kinds of food and the appetite is greatly increased. This emulsion is especially advantageous in tubercular dysphagia.

—Brit. Med. Jour., 1899.

(While the above author met with no disagreeable complications in the use of strong solutions of orthoform, several cases of orthoform poisoning are on record. Dr. Broeg (La Presse Med., No. 30, '99) for instance, de-

scribes two cases in which the local application of orthoform produced very troublesome symptoms. In one patient the application of an ointment (1 to 40) to the face induced great swelling and marked redness, lasting nearly three weeks. In another patient the use of the powder on a fissure of the vulva caused intense tumefaction, and nodular swelling in various parts of the body. Like with all other poisonous drugs, it is advisable to be cautious in the use of orthoform.)

H. B. S.

THERAPEUTIC HINTS.

Five drops of tincture of lobelia in two ounces of water, half a teaspoonful every few minutes, given warm, is said to cure many cases of infantile colic from whatever cause. It soothes nervous irritation and induces sleep.

Powdered jumbul seeds in five to ten grain doses is valuable in diabetes mellitus.

Chloroform water is said to be a pleasant and efficient emetic in false croup.

Oil of sassafras is said to destroy all varieties of pediculi and their ora after a single application.

H. B. S.

CHLORAL HYDRATE IN WHOOPING COUGH.

Dr. Willoughby relies chiefly on chloral hydrate as a drug in whooping cough. Given in such doses and at such intervals, which may be left to the discretion of a careful mother, that a child shall sleep, say, half again as many hours as it otherwise would, and be disposed to doze, or at any rate to lie down from time to time during the day, the severest attacks may be moderated in a few days, the illness henceforth assuming a favorable course. With very young infants in whom the asphyxia and cerebral congestion induced by violent and prolonged paroxysms leads to convulsions, a few double doses given in closer succession completely obviates the danger. The effect of chloral as nearly approaches the character of a specific remedy as can well be imagined in a specific disease, that must run a definite course; and when with this treatment the general or hygienic rules are strictly adhered to the termination of the cough at the end of three or four weeks is often surprisingly abrupt and complete. In some cases it may be useful to combine a bromide with the chloral, and of late years he has found its action greatly aided by combining it with antopyrine —alcohol, antipyrine and wine of ipecac, with syrup, being now his favorite formula. After a thorough trial of bromoform the result did not encourage him to depart from his previous practice.

H. B. S.

—Therapist, London, May 15, 1899.

INSOMNIA OF THE INSANE.

Dr. Cristians tried lacto phenin in over 200 cases of insomnia of the insane with very good results. It was administered in one to three grain doses in the form of a sweet emulsion. Sleep that had all the characters of a natural slumber followed in a very short time, lasted from four to nine hours, and was not succeeded by any bad effects. Like most other hypnostics, it lost its effect after continued use, but after a short intermission could be used again with good results. The author considers it preferable to opium, chloral, trional, etc., as it has no taste or smell, and can, therefore, be administered without difficulty.

H. B. S.

—University Med. Mag.

CARBOLIC ACID TABLETS.

Dr. G. Meyer calls attention to a carbolic acid tablet made according to a formula of Lutze, which is practicable and permanent. Each tablet contains 15 grains of carbolic acid.

To this 20 per cent. of anhydrous boric acid is added. This salt has the property of taking up large amounts of moisture without becoming liquefied. These tablets may then be placed in warm or cold water and the carbolic acid can be seen to dissolve out of the tablet in small drops. By shaking the solution gently a uniform mixture can be obtained. The odor and taste are characteristic enough to prevent their being mistaken for any other kind of tablet.

H. B. S.

—Merck's Archives.

HINTS ON THE PRESERVATION OF HEALTH.

Beards in hospitals are now regarded as dangerous. This leads Mr. Sims to draw up the following:

After a visitor with a beard has left the house, open all doors and windows, remove the coverings of the furniture and bake them, disinfect the premises from floor to ceiling, and take a bath of Condy's Fluid.

All dogs and cats on the premises should be shaved weekly, as their long hair harbors microbes.

Remove all feathers and down from the canary.

If you are still nervous about microbes, shave your head.

HAT-PIN IN MALE BLADDER.

BY HERMAN B. SHEFFIELD, M.D.

L. D., 34 years old, a roofer by trade, had gonorrhea with consecutive stricture about ten years ago. The structure required occasional dilations by means of sounds. In order to save the physician's fee the patient attempted to treat himself, and whenever urination became difficult he was in the habit of introducing a hat-pin into the urethra and keeping it there for ten minutes. On December 2, 1898, after a night of intoxication, he introduced the pin in the usual way. To his dismay the point slipped from his tremulous fingers, and all of his attempts to withdraw the pin proved futile. Six hours after the accident the patient called to see me. The pin point could be felt right under the skin at about one-quarter of an inch from the junction of the scrotum and penis, in the inferior groove of the corpus cavernosum and corpus spongiosum. The patient thought that the pin had traveled in all directions before reaching this spot. The meatus urinaris was clogged with a little blood, and the urine, which could be passed with but slight pain, was also mixed with blood. Not realizing at the time what difficulties such a case could involve, I made a small incision over the pin point, and taking hold of it I pulled the pin till the head neared the surface. I then enlarged the incision and withdrew the pin. After washing and dressing the wound antiseptically, I advised the patient to go to bed; this he did not do. In the evening he came again feeling well and pleased. Upon examination I found that about two drams of blood had collected around the glands penis. In order to prevent fibrous union I introduced into the urethra a soft rubber catheter, No. 6, once a day for three successive days. The temperature was never above 101 degrees F. Within a week the wound healed and the patient has had no urinary obstruction since.

The pin was 7 1-2 inches in length its head about 3-8 inch in diameter. It was quite black and rusty, especially at the insertion of the shaft into its head.

It is certainly remarkable that under these conditions the patient escaped septic infection. This case tends to strengthen my belief that the bladder is well capable of taking care of itself if not interfered with by the physician.

—Phila. Med. Jour., Vol. 3, No. 18, 1899.

PEDIATRICS

In charge of LOUIS FISCHER, M. D.
and GEORGE A. SAXE, M.D.

DRY ANTITOXIN IN DIPHTHERIA.

Louis Fischer, in Pediatrics, July 15th, 1899, reports the clinical results of the use of the dry antitoxin of Behring in five cases of diphtheria of varying severity. This is the first time the dry serum has been used in this country. Fischer concludes that the advantage of the serum in this form is that, as it contains no antiseptics it does not give rise to those untoward symptoms which are sometimes seen in patients who have received injections of the ordinary liquid serum, and which are attributed to the presence of the above-mentioned antiseptics. The results of serum therapy in diphtheria are no longer doubtful. The dry serum seems to be more efficient as 1000 units are a curative dose, and in very malignant cases 2000 units were sufficient. The temperature fell by lysis from the time of injection.

PHENOL AND INDICAN IN THE URINE OF CHILDREN WITH GASTRO-INTESTINAL LESIONS.

E. Thomas, of Geneva, in a scholarly article on this subject in Pediatrics for July 1, 1899, reviews the work of other observers in this field, and adds a consideration of five cases of intestinal intoxication in children between the ages of four and nine years. The writer found that in these five cases of auto-intoxication there was a distinct indican reaction, and that in some of them there was also a diminution of the amount of urea excreted and a positive result on testing for acetone and phenol. The chief symptoms were disturbances of digestion, such as anorexia, nausea, vomiting, and in addition pallor and weak abdominal muscles.

(Indicanuria has been the subject of study of several observers, but little is as yet known as to its exact significance. The trouble is the fact that indican is found in normal urine, and that it is difficult to estimate the amount excreted, inasmuch as there is no quantitative test which can be used by the clinical worker. In order to ascertain the amount of indican in the clinical worker. If a more simple quantitative method could be be devised, it would be an easy matter for the clinician to work out the exact relationship between the amount of indican in the urine and certain clinical states.)

BOLOGNINI'S SYMPTOM IN MEASLES.

A. Koeppen, in the American Journal of Medical Science, 1899, No. 2, discusses the value of Bolognini's symptom in measles. This consists in a peculiar sensation of friction which the examiner's hand experiences when rubbing with the tips of the fingers over the surface of the abdomen in children who are in the initial stage of measles. Bolognini believed that this sign is due to an eruption of morbillous origin on the surface of the peritoneum, and that inasmuch as it exists in the prodromal period, it is a pathognomonic sign of measles. The writer studied 316 cases of measles during a recent epidemic, and found the sign only in 154 of these children. He believes that the friction sensation is not due to an eruption on the peritoneum, but is due to the presence of gas bubbles in the intestines. He found that the majority of the children in whom this symptom was present suffered from diarrhœa with foamy stools. Koeppen also found it in children who were free from measles, but suffered from

acute disturbances of the gastro-intestinal tract, although in these cases the symptom was not so distinctly felt. He has never observed the phenomenon with healthy subjects. The obvious conclusion is that the symptom of Bolognini is not to be regarded as pathognomonic of measles.

ANTHROPOMETRY IN CHILDREN.

In the current number of Ped iatrics we find an editorial under the above heading. The editor emphasizes the importance of anthropometry to the pediatrist. The criminologist, the anthropologist, the psychologist and the pedagogue have long ago recognized its value in their respective sciences, but the pediatrist has not as yet accustomed himself to regard this study as necessarily a part of his equipment. We are inclined to agree most decidedly with the writer of this editorial, and find the suggestion for the formation of a society, whose object shall be the encouragement of the pursuit of anthropometric studies, and whose membership shall be composed of representatives of all the sciences which are connected with this branch of knowledge, is a most excellent one. To this we would add a second suggestion, and that is, that the medical societies of our large cities take up the subject of anthropometry in our public schools. A systematic investigation of the mental and physical characteristics of our school population conducted on a large scale in a number of cities would throw light upon many questions of development, and would point out where we are at fault in our system of education and of hygiene. An attempt of this kind was made several years ago in London, where a committee was formed consisting of representatives of the medical, statistical and other scientific societies, under the direction of which a number of physicians examined one hundred thousand children in the metropolitan schools. Their report is full of interesting data, and gives the method of investigation pursued by these observers, a method devised by Dr. Francis Warner. Sporadic efforts of this kind were made also in Boston for several years. In Germany a great deal of work has been done, but the results apply to German children only, and we must remember that the essential purpose of the investigation is the determination of the influences of environment, social, physical and psychical upon the child. Hence the necessity of a local effort in this matter. Where the expenses will not be borne by the city government, they can be secured by public subscription. Surely there can be no nobler purpose than to benefit mankind as a whole, and there is hardly a better field for contributions from public spirited citizens.

THE USE OF THYROID EXTRACT IN JUVENILE OBESITY.

Dr. I. N. Love, of St. Louis, in his paper read before the section on diseases of children of the American Medical Association, discusses the value of thyroid therapy in the obesity of early age. He reports six cases of this kind, where he had used thyroid extract with more or less success. The adjuvants to this treatment were the observance of proper hygienic measures and the use of small doses of strychnine. The latter drug is used to combat the headache and cardia depression which is observed when thyroid is pushed. The treatment should be begun early. The dose is between two and one-half and five grains three times a day.

CLINICAL SURGERY AND SURGICAL PATHOLOGY.

In Charge of T. H. MANLEY, M. D., New York.

A NEW METHOD OF SUTURING THE PERITONEUM.

BY HENRY M. O'HARA, F. R. C. S. I., SENIOR HON. SURGEON TO THE ALFRED HOSPITAL, MELBOURNE.

I have always had a very high opinion of the stretching qualities of the peritoneum, as, for instance, in the case of a hernial sac.

The suturing of the peritoneum by the methods at present in vogue invariably invite adhesions to form with the parts beneath, whether it be a coil of intestine or a piece of omentum, and every surgeon who has had much experience in abdominal work can trace after troubles to this cause.

I have reopened the abdomen on many occasions for the cure of ventral hernia, also in urgent cases of acute intestinal strangulation, and have invariably discovered some adhesions. To avoid this serious complication I have hit upon a method that I think will reduce all chance of adhesions to a minimum; in fact, I don't think adhesions could form where my method was carried out properly.

Having exposed the peritoneum, I make a small incision, say three inches in length, through it, and, should I require a larger opening, by stretching gently with the index finger of each hand hooked into the opening, the membrane will yield. Should it not stretch sufficiently it can be divided with scissors.

Having completed the intra-abdominal work, I bring the peritoneum together by means of a purse-string suture, commencing at the centre and working round at a distance of 1-8 to 1-4 of an inch from the cut surface. The ends of the sutures are now pulled tight, and the peritoneal opening closes, leaving the raw surface puckered up external to the abdominal cavity. The muscles and aponeurosis are then approximated with interrupted sutures, and the skin treated by the subcuticular method. The longest incision I have treated has been eight inches, but the ease with which it came together leads me to believe that a much larger one could be so treated. I have adopted the method after the removal of ovarian tumors, after hysterectomy, and pylorectomy—in all with perfect success, and I have not seen any untoward symptom arise.

The chief points which I claim for my method are:—

1st. Freedom from adhesion to intestine.

2nd. A stronger abdominal wall to resist post anæthesial vomiting.

3rd. A complete barrier to any leakage of blood or pus from the more superficial structures.

4th. Simplicity of technique.

In conclusion I bring this method before the surgical world after having thoroughly tested it, and with perfect confidence as to the result.

—The Australian Medical Gazette.

Note.—Mr. O'Hara has given us one of the very best operations for the radical cure of hernia. It is known as the O'Hara, or the Australian operation. If this suggestion of closing the peritoneum is practicable as a general procedure it will certainly prove of great value, but until we have tested it in a considerable number of cases, and been able to support the opinion that the serous membrane is capable of the elastic properties claimed for it, we must regard it somewhat sceptically. T. H. M.

THE PROPER OPERATION FOR CANCER OF THE RECTUM.

BY JOSEPH M. MATHEWS, M. D., LL.D., LOUISVILLE, KY.

Two or three years ago I reported to the American Medical Association my results with the Kraske operation, having at that time performed it five times. In that paper I stated the individual belief that the time would come when the surgeons of this country would not operate by the Kraske method. In the discussion Dr. Senn, of Chicago; Dr. Tiffany, of Baltimore, and others, objected to most of the paper. It is well known that Dr. Senn, this year before the American Medical Association at Denver, took the position that I did two or three years ago; he stated that he never intended to do the Kraske operation again. I do not reject the operation for its danger, or because it is a major operation, but for the graver reason that whenever it is determined to remove the whole rectum, the time for any operations has passed.

If the rectum proper is affected in its entirety by a malignant growth, there must be infiltration of glands and of organs around the rectum that cannot be removed in the operation. If this premise is true, then the operation would be useless. Dr. Senn stated in his paper at Denver that the rectum can be removed in its entirety without sacrificing or damaging the sacrum, a statement with which I fully agree. The extensive dissection demanded by the Kraske method is not required in extirpation of the rectum. A circular incision around the anus, and if necessary the removal of the coccyx, gives all the room necessary. I have reported cases of excision of the rectum by the circular method which were quite as successful as those by the Kraske operation; it is not so difficult, so bloody, nor so dangerous.

Latterly a number of physicians have advocated thorough curettement of the rectum for malignant growths, if we believe them with as much success, so far as statistics go, as by extirpation. I confess I did not believe this. In the last three or four months several cases have been referred to me, where I thought the location of the malignant growth in the fixed part of the rectum permitted a radical extirpation by the curette.

Recently a lady was sent to me from a distant city with a malignant growth in the rectum as large as my fist. It was very friable, and I believed at the time if I attempted to remove it by the Kraske method, or a circular incision, that I would have great difficulty because of the soft nature of the cancer, so I concluded to curette. Dr. Ap Morgan Vance was present at the operation. I curetted the entire growth from the wall of the bowel until we could see and feel perfectly healthy tissue. It was remarkable how smooth the surface was where the growth had been curetted away. No nodule and no portion of the cancer remained. The patient is doing well, because there was no serious operation.

On two previous occasions I have done the same thing, though perhaps not so perfectly. As to the ultimate result in any of the cases where I have practiced curetting I cannot say. What of the results of extirpation of the rectum, by other methods? We must wait a sufficient time to justify us in passing a favorable verdict. No man has the right to go before a medical society and report a successful operation for cancer of the rectum in two or three months, scarcely in two or three years; if they wait a little longer there will be a reappearance of of the growth. Major surgical operations should not be favored, unless we believe they will cure, or radically benefit, our patients. After practicing curetting I am inclined to agree with those who advocate it. Perhaps it will supersede, to a great extent, the formidable operation of extirpation of the entire rectum, and the statistics may be quite as favorable as those reached in the operation for removal of the whole rectum.

THE PRESENCE OF FOREIGN BODIES IN THE VERMIFORM APPENDIX, WITH ESPECIAL REFERENCE TO POINTED BODIES.

BY JAMES F. MITCHELL, M. D.

The suggestion of a pin being the cause of an appendicular abscess as brought out in the history of a patient in the Gynæcological Wards of the Johns Hopkins Hospital has led, with Dr. Kelly's encouragement, to this inquiry, as to foreign bodies in general as a cause of appendicitis, and especially pointed bodies.

The patient, a girl aged twenty, was admitted to the service of Dr. Kelly with a sinus in the abdominal wall at the right iliac fossa. It was stated that when about six or seven years of age, she had pain in the right iliac region followed by an abscess developing sufficient to be opened in forty-eight hours. The wound was dressed every day thereafter, and some time later a pin was found in the discharge from the wound and the whole trouble was attributed to that. There was no further trouble until about four years ago, since when she has repeated attacks of appendicitis more or less typical.

As to the frequency with which foreign bodies other than fæcal masses are found in the vermiform appendix, our opinions have changed greatly in the last ten years; at one time the presence of a foreign body was thought essential to an appendicitis, and the classical orange, date, or cherry seed were often described. Undoubtedly many of them, so eagerly sought, were nothing more than fæcal concretions which are likely to assume these shapes, and unless carefully examined easily deceive the observer. From this extreme the other has now been reached. Many writers at the present day go so far as to state that foreign bodies are never found as the cause of appendicitis, and this attitude would seem to find some justification in the following facts:

Fitz, in 1886, collected 152 cases of perforative appendicitis, and found 12 per cent. of foreign bodies with 47 per cent. of fæcal concretions while Hawkins, in 1895, in 67 fatal cases did not find a single foreign body. In 250 cases of appendicitis in the Johns Hopkins Hospital in the past ten years, there has been only one foreign body—a segment of tapeworm.

With this object in view I have collected 1400 cases from various sources in the last ten years, and find about 7 per cent. of true foreign bodies; while in 700 of these cases, in which a definite statement was made as to the nature of the foreign body, there were 45 per cent. of fæcal concretions. The older statistics invariably give a higher percentage of foreign bodies.

While so many accounts are evidently untrustworthy because of lack of careful examination, the undoubted occurrence of many queer and interesting objects as shot, pins, worms, gall-stones, a tooth, or a piece of bone, has been recorded; and even Fenger had a case in which two grape seeds and an oat husk were found, and Welch once met with a date seed. Osler, in ten years' experience in Montreal, found foreign bodies only twice; in one instance five apple pips, and in another eight snipe shot. Stone, of Omaha, and Ransohoff, of Cincinnati, each removed an appendix containing a bullet (Fig. 6) as the exciting cause. A case is reported by Holmes, in which 122 robin shot were present in the appendix of an old man dead of pneumothorax, who, during life, had had no symptoms referable to the appendix; but who, it is stated, was very fond of game. Interesting in connection with this is the following observation in the Mémoires de l'Académie Royale de Chirurgie in 1743. "One notices sometimes in opening the bodies of persons who, during life, have eaten a great deal of game that there is collected in the intestines, and especially in the cæcal appendix, a great quantity of shot, without those

persons having had the least inconvenience."

—Jonhs Hopkins Hospital Bulletin.

SOME REMARKS ON THE ETIOLOGY OF CYSTITIS IN THE FEMALE.*

BY NICHOLAS SENN, M. D., PH. D., LL. D., CHICAGO, ILL.

Professor of Surgery in Rush Medical College; Professor of Surgery in the Chicago Policlinic, etc.

The great advancement recently made in the prevention and more successful treatment of infective surgical diseases may be said to be the direct outcome of the vast increase of our knowledge concerning their etiology. Surgical bateriology has paved the way for rational surgery.

It is now generally conceded that acute inflammation of any tissue or organ is invariably caused by microbe invasion; and that all other causes only act by determining or favoring such infection. If this be true, it is apparent that the successful treatment of cystitis presupposes an accurate knowledge of the nature of the microbe origin of the inflammation. Suppurative cystitis and tubercular cystitis, for example, are so entirely different in the nature of their bacteriological origin that the method of treatment successful in one would almost with certainty aggravate the other.

Inflammation of the bladder is often the result of a mixed infection; therefore it is of paramount importance in all cases to gain accurate information (by bacteriologic examination of the urine) concerning the part which each variety of microbe plays in the causation and continuance of the inflammatory lesion before an intelligent and successful course of treatment can be devised and carried into effect. It is of special importance in the successful management of cystitis, and conditions mimicking cystitis clinically, to make a sharp distinction between the cases in which the symptoms are caused by inflammation and those in which they depend upon noninflammatory pathological conditions. It will be readily seen from what has been said that the modern etiologic study of cystitis is based largely on a carefully conducted bacteriologic examination of the urine. The exercise of patience and perseverance is often required, as in many cases the urine has to be examined repeatedly before the necessary information is gained.

I have just remarked that while all inflammations of the bladder depend primarily upon infection with certain microorgansisms (as do all acute inflammatory processes) there are other things—generally called "predisposing causes"—which assist in determining or establishing the infection. These predisposing causes do one of two things or both:

1. They effect tissue changes which determine the localization of microbes from the bladder, adjacent organs or the general circulation.

2. They furnish a nutrient medium for the growth and multiplication of the microbes.

The most frequent of all predisposing causes of cystitis is retention of urine from any cause. Abnormally increased muscular action of the bladder, such as occurs in cases of central or peripheral irritation of the nerves which preside over the muscular structure of this organ, or in consequence of the action of local irritants, as a stone, foreign bodies, tumors, chemic or toxic substances, is a recognized predisposing cause of inflammation of the bladder. Abnormal conditions affecting the quality or quantity of urine frequently precedes inflammation of the bladder, and must also be regarded in the light of predisposing causes. Tumors of the bladder, malignant and benign, frequently precede and complicate cystitis. A calculus or a foreign body becomes a predisposing cause of cystitis. Pressure from either direction diminishes the vascularity and nutrition of the and growth of bacteria, which are the

*Read before the Chicago Gynecological Siciety.

essential cause of the inflammation. Compression of the bladder from within and from bladder wall, and in this way increases the susceptibility of the tissues to invasion by disease-producing microorganisms. Venous stasis is a local predisposing cause of cystitis. To trauma has been assigned for centuries a direct influence in the causation of cystitis.

The essential or exciting cause of cystitis is invariably the presence and pathogenic action of microbes in the tissues of the bladder, the seat of inflammation. In the study of etiology of cystitis it is important to consider in detail the routes of infection. Under the head of exciting causes, then, we must carefully bear in mind that the infection may arise from a gonorrheal or other infection of the urethra associated with pus-producing microbes; also infection through the urine from above; as well as infection through the blood and extension of inflammation from adjacent organs. Each must in turn receive proper attention in every case until the source of infection be discovered and remedies applied for its relief since it is at once apparent that it is the height of absurdity to begin the treatment of cystitis without determining and removing the source of trouble.

It is also necessary that we should adopt a rational classification before attempting the study of the etiology, symptomatology, diagnosis, prognosis and treatment of this disease, which is so often but an associate of grave lesion elsewhere. We have two bases upon which classification has been attempted: (1) The anatomic; (2) the pathololgic.

In the anatomic classification we have pericystitis, paracystitis, interstitial cystitis and endocystitis.

Under the head of pathologic classification we have catarrhal cystitis; suppurative cystitis; ulcerative cystitis; exudative cystitis; exfoliative cystitis. Clinically we may have acute cystitis and chronic cystitis; and bacteriologically the following: (1) Bacillus coli commune infection; (2) saprophytic (mixed) infection; (3) staphylococcus infection; (4) streptococcus infection; (5) typhoid infection; (6) diplo-bacillus infection; (7) gonococcus infection, and (8) bacillus tuberculosis infection. The bacteriologic classification of cystitis is the most modern and certainly the most important. It has a direct bearing on the etiology of the disease, and suggests to the surgeon the most rational course to pursue in its treatment. In long standing and obscure cases of inflammation of the bladder, examination is not complete without examination of the urine with sufficient care and thoroughness upon which to base a correct bacteriologic classification. Surgeons must learn to appreciate the value and importance of this part of the examination before they can expect material advances in the treatment of cystitis. If the surgeon has not the necessary knowledge or equipment to make these examinations satisfactorily, he should assign this part of his task to a competent bacteriologist.

RESULTS OF CESAREAN SECTION.

Recovery after Cesarean section is frequently disturbed by the suppurating out of the threads used in suturing the uterus, and by the formation of adherences between the uterus and the abdominal wall, which may interfere with the menses and subsequent pregnancy. In one case observed by G. Abel, at the Leipsic clinic, the posterior wall of the uterus tore in the sixth month of pregnancy, on account of adherences, and two similar cases are on record. He has traced fifty-three cases in which Cesarean section was performed, for an average of six and a half years. In eight cases hernia occurred in the laparotomy wound. The operation was performed twice in eleven cases and three times in four. Chrobak has also recently reported a third successful Cesarean section on a woman with a very con-

tracted pelvis. Abel states that repetition does not enhance the dangers of the operation nor diminish the subsequent working capacity, which he considers decides in the negative the question of the advisability of artificially producing sterility in cases of contracted pelvis. Zweifel has a record of sixty-seven Cesarean sections with one death from pre-existing sepsis. He has not found the Fritsch superior to the sagittal fundal incision, while it has the disadvantage of being nearer to the large vessels at the insertion of the tubes. In suturing the uterus he now takes two or three stitches with fine silk, completing the suture with catgut; no threads have suppurated out since he adopted this method. The "Cesar" children have all thrived well, mentally and physically.

—Munich Med. Woch., Feb. 7.

OPERATION FOR GALL STONES.

Delagénière, of Le Mans, believes that cholecystotomy, as usually performed, is open to numerous objections. When the gall bladder is opened the forceps may fail to grasp the calculi, yet inflict damage on the adjacent structures. The crushing of calculi by pressure on the duct in which they are impacted, or the use of a needle thrust through the walls of the duct to split them, are processes which seem clumsy surgery. Delagénière exposes the gall bladder thoroughly, and raises the edge of the liver as high as possible with a retractor. Then the peritoneum is guarded with a compressor or sponge, and the fundus of the gall bladder opened. The incision is enlarged with scissors along the left aspect of the gall bladder, till the calculi to be removed are reached. A Kocher's forceps is placed on each side of the incision; the two will draw the deeper parts well towards the abdominal wound. The duct may be cut open almost to its termination in a bad case. In certain instances a large calculus in the lower part of the duct must be cut upon directly or through the duodenum. A direct localized incision is more likely to make a stricture than an incision made along the whole canal. When the calculi are extracted Delagénière closes the long incision in the duct and gall bladder with a running suture of very fine silk. Interrupted sutures should be applied after every third point of entry of the long suture. In order to establish a biliary fistula, about half an inch of the incision at its end on the fundus of the gall-bladder is left open. The peritoneum is then sutured all round the opening in the fundus, a little of the flaccid wall of the bladder being drawn forward first, so that the serious membrane is not fixed actually to the edges of the opening. A hole is next made in the right rectus muscle, and the free piece of the wall of the gall bladder drawn into it, the edges of the opening in the bladder being sewn to the edges of the hole in the muscle. Another buttonhole is made in the skin over the hole in the rectus, and a drainage tube passed through it into the gall bladder. The abdominal incision (which lies to the right of the artificial track of the drainage tube) is closed. In about ten days the fistula may be sewn up, the wound in the bladder and duct being healed.

—Rev. de Gynec. et d'Obstet., Jan.-Feb., 1899.

PUBLISHER'S MISCELLANY.

Among the remedies employed in cases of subacute intestinal catarrhs in infants, the following combination is highly recommended by Dr. Hock (Charlotte Medical Journal.)

Tannigen .....30 grains
Sacchar. Lact.....45 grains
Div. in chart. No. X.

Sig.—One-half powder every four hours.

Dr. A. M. Clark (Atlanta Medical and Surgical Journal) recommends in entero-colitis in infants:

Tannigen.....20 grains
Pulv. peptenzyme .....30 grains
Syr. aurantii.....4 drachms
Aquæ q. s.....2 ounces
M. Sig.—One teaspoonful every three or four hours.

Professor Ewald (Medical News) prescribes in obstinate acute intestinal catarrh:

Resorcin.....75 grains
Bismuth Salicylate,
Tannigen. a. a. 1-2 oz.
White Sugar
Sodium carbonate, a. a. 2 d'chms.
M. Ft. Pulv. Sig.—Small teaspoonful every two hours.

THE VALUE OF BOVININE.

BY JNO. ALSDORF, M. D., NEW YORK.

A close study of the principles of therapeutics shows us that it is the only one of the medical curriculum that has not attained to the dignity of a science.

The tendency to empiricism, which has so long clouded its progress, is, however, beginning to disappear as our knowledge of the physiological action of drugs upon the healthy human system becomes more familiar. The classifying of remedies, based upon the application of their physiological actions to therapeutics, has already shown its advantages, and will, in time, supplant all others.

Many empirical facts are well-founded, and should not be overlooked in any review of the different substances of the materia medica.

The writer's attention was called to the use of bovinine in various diseased conditions, both on accounts of its physiological qualifications and the empirical facts submitted by the profession in all parts of the world, demonstrating its value. If human testimony is worth anything at all, then bovinine must be the best of all blood producers.

A recent writer has compared the nervous ystem, with its great cerebro-spinal center, and elaborating network of connecting nerves, extending to all parts of the body, to a galvanic battery. When the battery shows signs of becoming "run down," the electrician proceeds to recharge it. The nerve centers are recharged for their wonderful work of evolving and giving out nerve force by recreation, rest, sleep, and suitable food. They are exhausted by excessive and long-continued activity, emotional strains, and physical excesses; also, by deficiency in the quality of the food, or by inability of the nutritive organs to assimilate the food provided.

It has been demonstrated that pure blood is the natural builder of healthy nerve structure. It should be provided in all conditions of deficient nerve vitality. The question arises, where in the materia medica is the medical man to find the remedy that will supply this want?

The writer openly states that bovinine, a raw food product, prepared from the juices of selected steers by a cold process, furnishing a perfect food, free from insoluble elements, and containing the blood corpuscles intact, is the remedy par excellence.

In conclusion, the writer would call

particular attention to the value of bovinine as topical application, and would advise his brother physicians, who are interested in the subject, to send to the bovinine company for a recent work, issued by them, entitled "Hæmo-theraphy, or Auxiliary Blood Supply."

CORDIAL OL. MORRHUÆ COMP.

A great desideratum in the medical practice is an ideal tissue builder. The busy practitioner frequently finds himself at a loss to decide upon the most efficient remedy for a given case, in spite of the great variety of drugs from which he may select. This is especially true in cases where tissue changes and waste are continuous, and where it is necessary to check the disintegration and repair and restore the waste of cellular tissue, resulting from established cachexias. In these cases remedies are required both for their antidotal properties and their food values. Under these circumstances that remedy which most nearly meets the requirements of the case is of most value.

I am rarely constrained to lend my indorsement to any proprietary remedy, though admitting in a general way, that many of them are excellent for the treatment of diseases for which they are recommended. But I have found in the use of Cord. Ol. Morrhuæ Comp. (Hagee), such marked benefit, that I feel justified in calling the attention of the profession to its merits, both as a medicine and tissue builder. Its elegance and excellence as a pharmaceutical product, the ease with which it is assimilated, its retention by the most delicate stomachs, all make it desirable for exhibition in cases where the principal indication is to guard the patient's stomach. Used in anæmic conditions associated with chlorosis when the catamenia are slow in asserting themselves or dysmenorrhæ exists on account of a deficiency of red blood corpuscles, or in cases of menorrhagia requiring the use of a tonic. I have secured excellent results, and have seen patients rapidly relieved of untoward symptoms, while in debilitated conditions following typhoid fever, when convalescence is slow, the effects of the remedy are all that can be desired. During convalescence from pneumonia, when resolution is slow, and the normal respiratory murmur is not rapidly established. I know of no better remedy. I have usel it satisfactorily with children, recovering from summer diarrhœa, in connection with milk or some of the most desirable baby foods upon the market.

In the primary stages of phthisis pulmonalis, I have confidence in its curative powers, while it has proved of advantage in my hands in all stages of the disease. It is particularly in the cases when the stomach has become so rebellious and so intolerant of medication, that I have found this remedy well borne and beneficial to the sufferer. I could cite many cases in which I have used the cordial, but will only subjoin one for the consideration of the profession.

M. H., female, white, age 16, American, tall, slim, slightly cachectic, poorly developed, general health below normal, suffers from amenorrhea, has some cough, mammary glands undeveloped, pulse 90, elevation of temperature 1-2 degree above normal, no expectoration with cough, no sinking of tissues above clavicle, slight dullness on percussion in apices of both lungs, auscultation reveals dry valves in apices of both lungs, slight hoarseness. History shows that menses appeared at fourteen and were regular for 3 or 4 months though scanty and painful, then ceased and had not reappeared up to present date. Prescribed Cord. Ol. Morrhuæ Comp. (Hagee), teaspoonful 4 times per day, tinct. ferri chlorid 10 drops 3 times per day, and occasional hot hip baths. The menstrual flow was re-established in two months and recovery was rapid and uneventful. At this time the patient is in excellent health and has had no tendency to relapse to her former condition.

N. M. Baskett, M. D.
Moberly, Mo.

UROTROPIN IN CYSTITIS.

BY J. B. McGEE, M. D.

Among the recent remedies, urotropin, a derivative of formaldehyde, has proved to be of more than ordinary value since its introduction to the profession by Nicolaier nearly four years ago. It is in the treatment of cystitis with decomposing alkaline urine that its chief merit lies, and it is evidently a urinary antiseptic of the highest rank.

It is a comparatively simple matter to render an acid urine alkaline by the use of various alkalies or their salts. In chronic cases of cystitis, however, and especially in those secondary to or coincident with prostatic hypertrophy, the residual urine, bacterial development and decomposition intensify the existing condition, and in the relief of these cases, with alkaline, ammoniacal and frequently purulent urine, urotropin excels. The indications here are to restore the urine to its normal acidity and also check the growth of the micro-organisms, and the therapeutic agents we possess and upon which we can rely to produce these effects are rather limited in number. The various alterative diuretics generally containing antiseptic oils upon which their activity depends frequently fail, and while the benzoates possess the power of rendering the urine acid, and are antiseptic as well, their action is not always as satisfactory as we may desire, though perhaps in a general way the best remedies we have until recently possessed. Of the drugs which we recognize as distinctly dependent upon their antiseptic qualities, arbutin which exist in uva ursi and its allies, is often efficient, its influence being due to hydroquinone, one of its decomposition products. The value of salol, while undoubted, depends on the carbolic and salicylic acids which it yields, and while the vesical condition might indicate its use, any renal complication here frequently present would render it unadvisable, as we know that any degree of nephritis is commonly conceded to be a contra-indication to its employment. Methylen-blue, while effective as an antiseptic, has the decided disadvantage of imparting its own color to the urine. None of these objections, however, apply to urotropin, which satisfies both indications to a degree possessed by no other drug now known. As it is a formaldehyde compound its effects are doubtless due to this body, whose power as a bactericide is most decided, and it is evidently the essential active agent in urotropin, whose liberation of it probably explains its influence, as when eliminated by the kidney it serves to render antiseptic the entire genito-urinary tract. When used it is necessary to give sufficient to keep the urine slightly acid, as when alkaline it fails to yield the formalin reaction, and the antiseptic effect of the remedy is lost.

One great advantage of urotropin is the absence of toxicity in ordinary medicinal doses. Dr. R. W. Wilcox states that it is practically safe in daily doses of thirty grains, although larger doses have been given without deleterious results. Personally I have never exceeded this amount and have found it not only safe, but sufficient, easily taken and almost specific in its power within a limited field.

Attention has been called to its use as a preparatory antiseptic in genito-urinary surgery and it will probably be of aid in treating specific urethritis. In cystitis it not only relieves the distressing symptoms, but probably also exerts an alterative action on the diseased vesical wall.

My personal experience with urotropin has been quite satisfactory and I may summarize a case which perhaps will exemplify its value:

A gentleman, 70 years of age, has been under my care with varying success at irregular intervals during the past six years for prostatic hypertrophy and chronic cystitis. The history presents the series of symptoms characteristic of this class of cases, and which is familiar knowledge. He has been obliged to carry and frequently use a catheter throughout these years, at no time feeling safe without it. Sev-

eral times a year extra exposure would eventuate in an exacerbation of his symptoms and he would be confined to his home for a time. His latest, and as he believes, his last attack was about six months ago. In this case I had tried almost everything of reputed worth from corn silk to saw palmetto. The benzoates and eucalyptus had generally yielded the best results, but this time although aided by anodynes, the relief was but slight and the distress incident to such a condition was severe. He was given urotropin in 7 1-2 grain doses four times daily and the rapidity of response indicated that the benefit derived was directly due to the remedy and not simply a coincidence. The influence was rather remarkable as in a few days the ropy alkaline urine became clear and acid, the pain, burning, and tenesmus disappeared, and the relief was so rapid and complete that as the patient expressed it, he felt like a boy again. Although several months have elapsed, he has had no return of the symptoms which were previously present in the intervals between his severe attacks, and has also thus far dispensed with his catheter, and is enthusiastic in praise of the remedy. This case had formerly under the usual lines of treatment persisted for so long a time that it seems worthy of mention. The drug was discontinued after about ten days' use, and while it evidently exerts no effect on the prostatic enlargement, it is satisfactory to know that we have an agent almost certainly capable of controlling the vesical symptoms sequential to such a condition.

Many of our newer remedies fail to stand the test of time and trial, but clinical testimony thus far indicates that urotropin will probably prove of permanent therapeutic worth. Safe, active and efficient, with an exceptional power in changing abnormal alkaline urine to a clear acid and aseptic condition, it appears to be an almost ideal urinary antiseptic of undoubted value in the class of cases to which such is adapted.

—Read before the Cuyahoga Co. Medical Society.

THE WILLIAM F. JENKS MEMORIAL PRIZE.

The fifth triennial prize of five hundred dollars, under the deed of Mrs. William F. Jenks, will be awarded to the author of the best essay on "The Various Manifestations of Lithæmia in Infancy and Childhood, with the Etiology and Treatment."

The conditions annexed by the founder of this prize are, that the "prize or award must always be for some subject connected with Obstetrics, or the Disease of Women, or the Diseases of Children;" and that "the Trustees, under this deed for the time being, can, in their discretion, publish the successful essay, or any paper written upon any subject for which they may offer a reward, provided the income in their hands, may, in their judgment, be sufficient for that purpose, and the essay or paper be considered by them worthy of publication. If published, the distribution of said essay shall be entirely under the control of said Trustees. In case they do not publish the said essay or paper, it shall be the property of the College of Physicians of Philadelphia."

The prize is open for competition to the whole world, but the essay must be the production of a single person.

The essay, which must be written in the English language, or if in a foreign language, accompanied by an English translation, must be sent to the College of Physicians of Philadelphia, Pennsylvania, U. S. A., before January 1, 1901, addressed to Richard C. Norris, M. D., Chairman of the William F. Jenks Prize Committee.

Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The Committee reserves the right not to make an award if no essay submitted is considered worthy of the prize.